

- 20 Valve coil
- 21 Adjusting sleeve
- 22 Pipe
- 23 Stepped section
- 24 Filter pot
- 25 Pin
- 26 Stepped bore
- 27 Valve closing element
- 28 Transverse duct
- 29 Return spring
- 30 Sealing ring
- 31 Valve carrier

Claims

1. Pressure control valve, particularly for the regulation of the hydraulic pressure in a motor vehicle driving system, with a valve tappet guided in a valve housing, which tappet presents at least a first valve closing element for disconnection or connecting a first pressure medium connection from or to a second pressure medium connection, with a valve seat turned toward the first valve closing element, as well as with a magnet armature actuating the valve tappet, which armature is arranged movably inside a valve coil arranged on the valve housing, characterized in that the valve seat (4) is arranged inside an independently operable valve seat member (5), which is fixed in the valve

housing by means of a centering element (7) which guides the valve tappet (6).

2. Electromagnetic valve according to Claim 1, characterized in that the centering element (7) is held with positive and/or frictional lock, preferably by means of a press connection, in the valve housing.

3. Electromagnetic valve according to Claim 1 or 2, characterized in that the centering element (7) presents a valve seat surface (10) and, to guide the valve tappet (6), a centering opening (11), and in that, besides being provided with the centering opening (11), the centering element (7) is perforated by at least one passage (12), which can be closed by means of a second valve closing element (13), which is applied on the valve tappet (6) and can be applied on the valve seat surface (10) of the centering element (7), in the direction of a third pressure medium connection (3)

4. Electromagnetic valve, according to Claim 3, characterized in that the second valve closing element (13) is preferably designed as a plate-shaped seat valve, which is preferably manufactured by punching, molding or deep drawing from a thin sheet metal which is pressed on the valve tappet (6).

5. Electromagnetic valve according to Claim 1, characterized in that the valve housing consists of a first and a second housing part (8, 9), where the first housing part (8) is designed

as a housing pot which can be manufactured by the deep drawing method, into which pot the valve seat member (5) and the centering element (7) are pressed.

6. Electromagnetic valve according to Claim 5, characterized in that the first housing part (8) is attached by means of a press connection to the second housing part (9), which is designed to receive a magnetic armature (14) as a tubular cold flow molded part or turned part, which presents a collar (15), against which the first housing part (8) is applied.

7. Electromagnetic valve according to one of the preceding claims, characterized in that the magnetic armature (14) is designed as a hollow cylinder, into which a magnetic armature sleeve (16), preferably manufactured by the deep drawing method, is pressed, which sleeve protrudes with its ends on both sides of the front surfaces of the magnetic armature (14).

8. Electromagnetic valve according to Claim 7, characterized in that one sleeve end presents an abutment (17) for receiving the valve tappet (6), and in that, on the side of the abutment (17), which side is turned away from the valve tappet (6), a compression spring (18), arranged inside the magnetic anchor sleeve (16), rests, and an adjusting sleeve (21), which is adjusted in the yoke ring (19) of the valve coil (20), is applied on said compression spring.

9. Electromagnetic valve according to Claim 8, characterized in that the yoke ring (19) consists of a sheet metal part which has been manufactured by the deep drawing method, which is put over the external circumference of the valve coil (20), and which is fastened in the inwardly crimped area to a pipe (22), which extends between the valve coil (20) and the magnetic armature (14).

10. Electromagnetic valve according to Claim 9, characterized in that for reaching the ground position of the magnetic armature (14), the pipe (22) presents, following its press fit area in the yoke ring (19), a stepped section (23) with expanded diameter on which the magnetic armature sleeve (16) rests.

11. Electromagnetic valve according to Claim 5, characterized in that a filter pot (24), which is provided with a ring filter fabric, is pressed onto the first housing part (8) where, on the floor of the filter pot (24), a pin (25) is arranged, which closes a stepped bore (26), arranged in the middle of the valve seat member (5), into which stepped bore the first valve closing element (27) is inserted.

12. Electromagnetic valve according to Claim 11, characterized in that above the pin (25) a transverse duct (28) opens into the stepped bore (26), which transverse duct is

connected with the first pressure medium connection (1), which opens radially into the wall of the first housing part (8).

13. Electromagnetic valve according to Claim 11, characterized in that the second pressure medium connection (2) extends, as a longitudinal duct eccentrically through the floor of the filter pot (24) as well as through the floor of the valve seat member (5) into the cavity of the centering element (7) and from there it is connected, as a function of the position of the two valve closed elements (13, 27) to the first and/or to the third pressure medium connection (1, 3).